

WHAT IS CLAIMED IS:

1. A document recognition apparatus comprising:  
means for continuously sensing part of a document  
to be recognized;  
5           means for calculating for each sensed document  
image a shift amount of a character string image of  
a document image to be compared from a character string  
image of a specific document image among a plurality of  
sensed document images; and  
10           means for, when the calculated shift amount  
reaches a predetermined amount, compositing a new  
character image in a character string image of  
a document image of which shift amount reaches the  
predetermined amount, with the character string image  
15           of the specific document image, thereby generating  
a document image.
2. An apparatus according to claim 1, further  
comprising means for storing a partial image of the  
continuously sensed document.
- 20           3. An apparatus according to claim 1, wherein  
said means for calculating the shift amount comprises:  
              means for obtaining a row region of the document  
image to be compared where the character string image  
is present;  
25           means for obtaining row feature projection data  
representing a luminance feature in the obtained row  
region; and

means for calculating a shift amount of the character string image of the document image to be compared from the character string image of the specific document image on the basis of row feature projection data of the specific document image and row feature projection data of the document image to be compared.

4. An apparatus according to claim 1, wherein said means for calculating the shift amount comprises:

means for obtaining a column region of the document image to be compared where the character string image is present;

means for obtaining column feature projection data representing a luminance feature in the obtained column region; and

means for calculating a shift amount of the character string image of the document image to be compared from the character string image of the specific document image on the basis of column feature projection data of the specific document image and column feature projection data of the document image to be compared.

5. An apparatus according to claim 1, wherein the predetermined amount is determined on the basis of a shape of row feature projection data of the specific document image.

6. An apparatus according to claim 1, further

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comprising means for displaying images of some of a plurality of documents which have successively been sensed and are to be recognized.

7. An apparatus according to claim 1, further comprising:

means for converting the generated document image into first document data;

means for displaying the converted first document data;

means for, when part of a document to be recognized is zoomed in and sensed by said image sensing means on the basis of the displayed first document data, converting image data of part of the document which has been zoomed in and sensed into second document data; and

means for replacing a character of the first document data that is different from the second document data, by a character of the second document data that corresponds to the different character.

8. A document recognition method comprising the steps of:

continuously sensing part of a document to be recognized;

calculating for each sensed document image a shift amount of a character string image of a document image to be compared from a character string image of a

specific document image among a plurality of sensed document images; and

when the calculated shift amount reaches a predetermined amount, compositing a new character image in a character string image of a document image whose shift amount reaches the predetermined amount, with the character string image of the specific document image, thereby generating a document image.

9. A method according to claim 8, wherein the  
10 step of calculating the shift amount comprises:

obtaining a row region of the document image to be compared where the character string image is present;

obtaining row feature projection data representing a luminance feature in the obtained row region; and

calculating a shift amount of the character string image of the document image to be compared from the character string image of the specific document image on the basis of row feature projection data of the specific document image and row feature projection data of the document image to be compared.

10. A method according to claim 8, wherein the step of calculating the shift amount comprises:

obtaining a column region of the document image to be compared where the character string image is present;

obtaining column feature projection data representing a luminance feature in the obtained column

region; and

calculating a shift amount of the character string image of the document image to be compared from the character string image of the specific document image on the basis of column feature projection data of the specific document image and column feature projection data of the document image to be compared.

11. A method according to claim 8, wherein the predetermined amount is determined on the basis of a shape of row feature projection data of the specific document image.

12. A method according to claim 8, further comprising the step of displaying images of some of a plurality of documents which have successively been sensed and are to be recognized.

13. A method according to claim 8, further comprising:

converting the generated document image into first document data;

20 displaying the converted first document data; when part of a document to be recognized is zoomed in and sensed by said image sensing means on the basis of the displayed first document data, converting image data of part of the document which has been zoomed in and sensed into second document data; and

25 replacing a character of the first document data that is different from the second document data, by

a character of the second document data that corresponds to the different character.